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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,532	08/01/2001	Takayuki Yamamoto	Q65685	3507

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EXAMINER

ZALUKAEVA, TATYANA

ART UNIT

PAPER NUMBER

1713

DATE MAILED: 04/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,532

Applicant(s)

YAMAMOTO ET AL.

Examiner

Tatyana Zalukaeva

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 4, 5, 9, 10 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The introduction of "molecular weight" instead of previously disclosed "weight average molecular weight" is not supported by original specification **before it was amended**. The instant specification clearly provides for the weight average molecular weight. This is a new matter situation.

3. The amendment filed February 4, 2003 is objected to under 35 U.S.C. 132 because **it introduces new matter into the disclosure**. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "molecular weight" versus "weight average molecular weight" as initially presented.

Applicant is required to cancel the new matter in the reply to this Office Action.

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4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4, 5, 9, 10 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The molecular weight limitations of 100,000 or less set forth in claims 4, 5, 9, 10 fails to identify whether this numerical value represents a weight average or a number average molecular weight determination. Therefore, claims 4, 5, 9, 10 do not set out and circumscribe a particular area with a reasonable degree of precision and particularity.

6. Claims 1, 3 and dependent claims have been amended to introduce the limitation of apparatus into the process claims and into the product-by-process claims.

7. The rejections under 35 USC 103(a) over Yamamoto and McGinniss based on 35 USC 102 rejections were overcome by Applicants' showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

8. Claims 1, 2, 6, 7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bamba et al (U.S. 6,224,938)

Bamba: discloses a method for producing pressure sensitive adhesive sheet or tape comprising subjecting a mixture of monomers to be polymerized to polymerization in an inert fluid in a supercritical state (abstract). Examples of monomers to be polymerized include acrylic acid monomers, listed in col. 2, lines 46-51 and others listed in col. 2, lines 53-65. Polymerization is performed in the presence of conventional free radical initiators (col. 3, lines 5-11, one of preferable supercritical fluid is named as carbon dioxide in col. 3, line 17. Polymerization temperature is from 20-100°C. Continuous process of polymerization is described in col. 4, lines 35-50. Furthermore, according to the method of the invention, in ejecting the pressure-sensitive adhesive to a low-pressure region, the residual monomer and low molecular weight components, which have a possibility to lower the pressure-sensitive adhesive properties, can be evaporated off simultaneously with the evaporation of the inert fluid.)paragraph bridging col. 4 and 5).

The disclosure of Bamba differs from the instant claims by different polymerization time and by not disclosing the particularities of the apparatuses for polymerization. With regard to apparatuses Bamba clearly suggests the continuous process in the extrusion apparatus, wherein the raw materials, such as monomer, initiator and inert fluid (supercritical carbon dioxide) are being pressurized and continuously supplied to the extrusion apparatus (col. 4, lines 35-40). This is similar to mixing the monomer solution and carbon dioxide in the joint mixer as per instant claims. Furthermore, it is noted here that it is noted here that the claimed invention calls for the process claims, wherein the steps of the process are met by the applied prior art, and

the structural limitations of apparatus do not present manipulative difference between the claimed process steps and the prior art process. Therefore, the recitation of specific structural limitations of apparatus for performing such steps does not serve to limit the claim. See, e.g., *In re Otto*, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963)

With regard to the difference in the residence time, it is well known in the art time and temperature are those parameters, which are conventionally adjusted to achieve the optimum of molecular weight (reduce chain transfer reactions), polydispersity, residual monomer content. Bamba, for example, motivates a person skilled in the art take measures to reduce residual monomer content, such as ejecting the pressure-sensitive adhesive to a low-pressure region, to evaporate the residual monomer and low molecular weight components, which have a possibility to lower the pressure-sensitive adhesive properties.

Therefore, a person skilled in the art would have found it obvious to adjust the reaction time, (which is a result effective parameter, as explained above), depending on the desired balance of polydispersity and molecular weight of resulting polymers and thus to arrive at the instant claims.

Discovery of optimum value of a result effective variable in known process is within the skills of one with ordinary skill in the art and would have been obvious, *In re Boesch and Slaney* 205 USPQ 215 (CCPA 1980).

9. Claims 3,4,5,8,9, and 10 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bamba.

Because of the nature of product-by process claims, the Examiner cannot ordinarily focus on the precise difference between the claimed product and the disclosed product. It is then Applicants' burden to prove that an unobvious difference exists. See *In re Marosi*, 218 USPQ 289, 292-293 (CAFC 1983).

See also footnote 11 O.G. Notice 1162 59-61, wherein a 35 USC 102/103 rejection is authorized in the case of product-by-process claims because the exact identity of the claimed product or the prior art product cannot be determined by the Examiner.

In re Thorpe, 227 USPQ 964 (CAFC 1985) the Examiner rejected product-by-process claims over a product, which although prepared in a different manner, appeared to be the same (prima facie) as the claimed product.

Consult also *In re Brown*, 173 USPQ 685 (CCPA 1972), the Court of Customs and Patent Appeals (CCPA) explicitly approved the 102/103 rejection of a product-by-process claim over a reference which showed a product which appeared to be identical or only slightly different from the claimed product.

Response to Arguments

10. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Applicants arguments are based on the difference between the prior art and the instant claims, which is introduced as an Amendment after the first Office Action and is

entirely based on the limitation of polymerization apparatus. These issues are addressed in the present office Action on the merits.

With regard to Applicants arguments on the molecular weight limitations it is not found persuasive. The issue of molecular weight is addressed above in 35 USC 112 first and second paragraph rejections.

The molecular weight of the compounds cannot be "simply defined as molecular weight" as suggested by Applicants. It should be "weight average", "number average" or viscosity based molecular weight.

It is imperative that the type of molecular weight be identified, since it is well known that molecular weight of a particular polymer yield significantly different "number average", and "weight average" numerical values.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (703)305-8819. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703)308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.


Tatyana Zalukaeva, Ph.D.
Primary Examiner
Art Unit 1713

Tatyana Zalukaeva
Primary Examiner
Art Unit 1713

April 14, 2003